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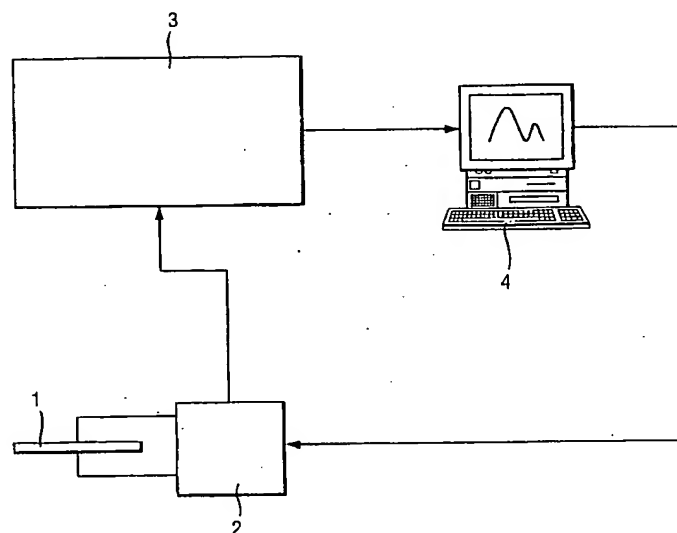
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(54) Title: **IMPROVEMENTS TO RUPTURE EVENT SENSORS**



(57) Abstract: An apparatus for separating an analyte from a mixture or for detecting an analyte or for determining the affinity, or a property related to affinity, between binding partners is described. The apparatus comprises: a) a surface having the analyte or one of the binding partners immobilised thereon, in use; b) a transducer for oscillating the surface; c) a controller connected to the transducer for varying the amplitude and/or frequency of the oscillation to cause a dissociation event; and, d) an analyser connected to the transducer for detecting an oscillation of the transducer due to the dissociation event. The controller includes an oscillator connected in a resonant circuit with the transducer such that the transducer oscillates at two frequencies simultaneously, one of these causing the transducer to oscillate the surface and the other being supplied as an output to the analyser.